

SEQUENCE LISTING

<110> Reinhard Ebner
Steven M. Ruben

<120> INTERLEUKINS-21 AND 22

<130> PF470

<140> Unknown

<141> 1999-05-27

<150> 60/087,340

<151> 1998-05-29

<150> 60/099,805

<151> 1998-09-10

<150> 60/131,965

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<170> PatentIn Ver. 2.0

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<213> Homo sapiens

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gcc gag tgc ctg tgc aga ggc tgt atc gat gca cgg acg ggc cgc gag 97
Ala Glu Cys Leu Cys Arg Gly Cys Ile Asp Ala Arg Thr Gly Arg Glu
20 25 30

aca gct gcg ctc aac tcc gtg cgg ctg ctc cag agc ctg ctg gtg ctg 145
Thr Ala Ala Leu Asn Ser Val Arg Leu Leu Gln Ser Leu Leu Val Leu
35 40 45

cgc cgc cgg ccc tgc tcc cgc gac ggc tcg ggg ctc ccc aca cct ggg 193
Arg Arg Arg Pro Cys Ser Arg Asp Gly Ser Gly Leu Pro Thr Pro Gly
50 55 60

gcc ttt gcc ttc cac acc gag ttc atc cac gtc ccc gtc ggc tgc acc 241
Ala Phe Ala Phe His Thr Glu Phe Ile His Val Pro Val Gly Cys Thr
65 70 75 80

tgc gtg ctg ccc cgt tca gtg tgaccgccaa ggccgtgggg cccttagact 292
Cys Val Leu Pro Arg Ser Val
85

ggacacgtgt gctccccaga gggcaccccc tatttatgtg tatttattgt tatttatatg 352

cctcccccaa cactaccctt ggggtctggg cattccccgt gtctggagga cagcccccca 412

ctgttctcct catctccagc ctcagtagtt gggggwtgaa ggagctcagc acctcttcca 472
 gcccttaaag ctgcagaaaa ggtgtcacac ggctgcctgt accttggytc cctgtcctgc 532
 tcccggcttc ccttacccta tcaactggcct caggcccccg caggctgcct cttcccaacc 592
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 <213> Homo sapiens

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 Ala Glu Cys Leu Cys Arg Gly Cys Ile Asp Ala Arg Thr Gly Arg Glu
 20 25 30
 Thr Ala Ala Leu Asn Ser Val Arg Leu Leu Gln Ser Leu Leu Val Leu
 35 40 45
 Arg Arg Arg Pro Cys Ser Arg Asp Gly Ser Gly Leu Pro Thr Pro Gly
 50 55 60
 Ala Phe Ala Phe His Thr Glu Phe Ile His Val Pro Val Gly Cys Thr
 65 70 75 80
 Cys Val Leu Pro Arg Ser Val
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 Leu Gln Leu Gly Pro Arg Glu Gln Ala Arg Asn Ala Ser Cys Pro Ala
 20 25 30
 ggg ggc agg ccc gcc gac cgc cgc ttc cgg ccg ccc acc aac ctg cgc 143
 Gly Gly Arg Pro Ala Asp Arg Arg Phe Arg Pro Pro Thr Asn Leu Arg
 35 40 45
 agc gtg tcg ccc tgg gcc tac aga atc tcc tac gac ccg gcg agg tac 191
 Ser Val Ser Pro Trp Ala Tyr Arg Ile Ser Tyr Asp Pro Ala Arg Tyr
 50 55 60
 ccc agg tac ctg cct gaa gcc tac tgc ctg tgc cgg ggc tgc ctg acc 239

ggg ctg ttc ggc gag gag gac gtg cgc ttc cgc agc gcc cct gtc tac 287
Gly Leu Phe Gly Glu Glu Asp Val Arg Phe Arg Ser Ala Pro Val Tyr
80 85 90 95

atg	ccc	acc	gtc	gtc	ctg	cgc	cgc	acc	ccc	gcc	tgc	gcc	ggc	ggc	cgt	335
Met	Pro	Thr	Val	Val	Leu	Arg	Arg	Thr	Pro	Ala	Cys	Ala	Gly	Gly	Arg	
				100					105					110		

tcc	gtc	tac	acc	gag	gcc	tac	gtc	acc	atc	ccc	gtg	ggc	tgc	acc	tgc	383
Ser	Val	Tyr	Thr	Glu	Ala	Tyr	Val	Thr	Ile	Pro	Val	Gly	Cys	Thr	Cys	
			115					120					125			

gtc ccc gag ccg gag aag gac gca gac agc atc aac tcc agc atc gac 431
Val Pro Glu Pro Glu Lys Asp Ala Asp Ser Ile Asn Ser Ser Ile Asp
130 135 140

aaa cag ggc gcc aag ctc ctg ctg ggc ccc aac gac gcg ccc gct ggc 479
Lys Gln Gly Ala Lys Leu Leu Leu Gly Pro Asn Asp Ala Pro Ala Gly
145 150 155

ccc tgaggccggt cctgccccgg gaggtctccc cggccccgat cccgaggcgc 532
Pro
160

ccaagctgga gccgcctgga gggctcggtc ggcgacctct gaagagaagt caccgaqcaa 592

accaagtgcc ggagcaccag cgccgccttt ccatggagac tcgtaagcag cttcatctga 652

cacggggcatc cctggcttgc ttttagctac aagcaagcag cgtggctgga agctgatggg 712

aaacgacccg gcacggggcat cctgtgtgcg gcccgcattg agggtttgga aaagtccacg 772

gaggctccct gaggagcctc tcagatcggc tgctgcgggt gcagggcggtg actcaccgct 832

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aagtatagcg actatatacc tactttttaa atcaactggt ttgaatagag gcagagctat 952

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ggatcaggct gaatatgagg acaaagtggg ccacgttagc atctgcagag atcaatctgg 1492

aggcttctgt ttctgcattc tgccacgaga gctaggtcct tgatcttttc tttagattga 1552

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1642

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<213> Homo sapiens

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Gln Leu Gly Pro Arg Glu Gln Ala Arg Asn Ala Ser Cys Pro Ala Gly
 20 25 30

Gly Arg Pro Ala Asp Arg Arg Phe Arg Pro Pro Thr Asn Leu Arg Ser
 35 40 45

Val Ser Pro Trp Ala Tyr Arg Ile Ser Tyr Asp Pro Ala Arg Tyr Pro
 50 55 60

Arg Tyr Leu Pro Glu Ala Tyr Cys Leu Cys Arg Gly Cys Leu Thr Gly
 65 70 75 80

Leu Phe Gly Glu Glu Asp Val Arg Phe Arg Ser Ala Pro Val Tyr Met
 85 90 95

Pro Thr Val Val Leu Arg Arg Thr Pro Ala Cys Ala Gly Gly Arg Ser
 100 105 110

Val Tyr Thr Glu Ala Tyr Val Thr Ile Pro Val Gly Cys Thr Cys Val
 115 120 125

Pro Glu Pro Glu Lys Asp Ala Asp Ser Ile Asn Ser Ser Ile Asp Lys
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 20 25 30

Cys Pro Asn Ser Glu Asp Lys Asn Phe Pro Arg Thr Val Met Val Asn
 35 40 45

Leu Asn Ile His Asn Arg Asn Thr Asn Thr Asn Pro Lys Arg Ser Ser
 50 55 60

Asp Tyr Tyr Asn Arg Ser Thr Ser Pro Trp Asn Leu His Arg Asn Glu
 65 70 75 80

Asp Pro Glu Arg Tyr Pro Ser Val Ile Trp Glu Ala Lys Cys Arg His
 85 90 95

Leu Gly Cys Ile Asn Ala Asp Gly Asn Val Asp Tyr His Met Asn Ser
 100 105 110
 Val Pro Ile Gln Gln Glu Ile Leu Val Leu Arg Arg Glu Pro Pro His
 115 120 125
 Cys Pro Asn Ser Phe Arg Leu Glu Lys Ile Leu Val Ser Val Gly Cys
 130 135 140
 Thr Cys Val Thr Pro Ile Val His His Val Ala
 145 150 155

<210> 6
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 <213> Mus musculus

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 20 25 30
 Ser Ala Cys Pro Asn Thr Glu Ala Lys Asp Phe Leu Gln Asn Val Lys
 35 40 45
 Val Asn Leu Lys Val Phe Asn Ser Leu Gly Ala Lys Val Ser Ser Arg
 50 55 60
 Arg Pro Ser Asp Tyr Leu Asn Arg Ser Thr Ser Pro Trp Thr Leu His
 65 70 75 80
 Arg Asn Glu Asp Pro Asp Arg Tyr Pro Ser Val Ile Trp Glu Ala Gln
 85 90 95
 Cys Arg His Gln Arg Cys Val Asn Ala Glu Gly Lys Leu Asp His His
 100 105 110
 Met Asn Ser Val Leu Ile Gln Gln Glu Ile Leu Val Leu Lys Arg Glu
 115 120 125
 Pro Glu Ser Cys Pro Phe Thr Phe Arg Val Glu Lys Met Leu Val Gly
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 Val Gly Cys Thr Cys Val Ala Ser Ile Val Arg Gln Ala Ala
 145 150 155

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 35 40 45
 Ile Arg Asn Trp Asn Thr Ser Ser Lys Arg Ala Ser Asp Tyr Tyr Asn
 50 55 60
 Arg Ser Thr Ser Pro Trp Thr Leu His Arg Asn Glu Asp Gln Asp Arg
 65 70 75 80
 Tyr Pro Ser Val Ile Trp Glu Ala Lys Cys Arg Tyr Leu Gly Cys Val
 85 90 95
 Asn Ala Asp Gly Asn Val Asp Tyr His Met Asn Ser Val Pro Ile Gln
 100 105 110
 Gln Glu Ile Leu Val Val Arg Lys Gly His Gln Pro Cys Pro Asn Ser
 115 120 125
 Phe Arg Leu Glu Lys Met Leu Val Thr Val Gly Cys Thr Cys Val Thr
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 Pro Ile Val His Asn Val Asp
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 Gly Arg Pro Gly Pro Leu Ala Pro Gly Pro His Gln Val Pro Leu Asp
 35 40 45
 Leu Val Ser Arg Met Lys Pro Tyr Ala Arg Met Glu Glu Tyr Glu Arg
 50 55 60
 Asn Ile Glu Glu Met Val Ala Gln Leu Arg Asn Ser Ser Glu Leu Ala
 65 70 75 80
 Gln Arg Lys Cys Glu Val Asn Leu Gln Leu Trp Met Ser Asn Lys Arg
 85 90 95
 Ser Leu Ser Pro Trp Gly Tyr Ser Ile Asn His Asp Pro Ser Arg Ile
 100 105 110
 Pro Val Asp Leu Pro Glu Ala Arg Cys Leu Cys Leu Gly Cys Val Asn
 115 120 125
 Pro Phe Thr Met Gln Glu Asp Arg Ser Met Val Ser Val Pro Val Phe
 130 135 140
 Ser Gln Val Pro Val Arg Arg Arg Leu Cys Pro Pro Pro Pro Arg Thr
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 Gly Pro Cys Arg Gln Arg Ala Val Met Glu Thr Ile Ala Val Gly Cys
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Thr Cys Ile Phe
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tctccccggac tcctgaggtc acatgcgtgg tgggtggacgt aagccacgaa gaccctgagg 180
tcaagttcaa ctggtacgtg gacggcgtgg aggtgcataa tgccaagaca aagccgcggg 240
aggagcagta caacagcacg tacctgtgtg tcagcgtcct caccgtcctg caccaggact 300
ggctgaatgg caaggagtac aagtgaagg tctccaacaa agccctccca acccccatcg 360
agaaaaccat ctccaaagcc aaagggcagc cccgagaacc acaggtgtac accctgcccc 420
catccccggga tgagctgacc aagaaccagg tcagcctgac ctgcctgggc aaaggcttct 480

atccaagcga catcgccgtg gagtgggaga gcaatgggca gccggagAAC aactacaaga 540
 ccacgcctcc cgtgctggac tccgacggct ccttcttctt ctacagcaag ctcaccgtgg 600
 acaagagcag gtggcagcag gggaacgtct tctcatgctc cgtgatgcat gaggctctgc 660
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 gactctagag gat 733

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 cccgaaatat ctgccatctc aattag 86

<210> 16
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 <212> DNA
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<400> 16
 gcggcaagct ttttgcaaag cctaggc 27

<210> 17
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 aaatatctgc catctcaatt agtcagcaac catagtcccc cccctaactc cgcccatccc 120
 gccctaact ccgcccagtt ccgcccattc tccgccccat ggctgactaa ttttttttat 180
 ttatgcagag gccgaggccg cctcggcctc tgagctattc cagaagtagt gaggaggctt 240
 ttttgagggc ctaggctttt gcaaaaagct t 271

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 <212> DNA
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 ccattctcaat tag 73

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<210> 23
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 cagttccgcc cattctccgc cccatggctg actaattttt tttatttatg cagaggccga 180
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 aaggcgtgga ctcaccgctg ggtgcttgcc aaanaggata gggacgcata tgcttttttaa 180
 agcaatctaa aaataataat aagtatagcg actatatacc tactttttaa atcaactgtt 240
 ttgaatagag gcagagctta ttttatatta tccaaatgag agctactctg ttnacatttt 300
 ctttaaacaat tttaaacatn gnttttttna cttcttncgt ggtnggattt tttttaaagg 360
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 ctgccccggg aggtctcccc ggncccgcat cccgaggcgc ccaagctgga gccgcctgga 180
 ggnttcggtc ggcgactctg aagagagtnc accgagcaaa ccaagtgccg gagcaacagc 240
 gncgnctttt ncatggagat tcgtaagcan ttttcatttg acanggggat ccctgggttg 300
 tttttagtta caagcaagca nntggnttga agtnngntggg gaaaggancc gnagggattc 360
 tgtnttnggg gccntntgga gggtttttga aaatttnagg gggtttctgn gggtttttta 420
 anattggntt tttttagggt tnaagggttn nttaacttgg gngtttttctn aanngttggg 480
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gttcagagac agactttcaa tctaaagaaa agatcaaggn cctagctctn gtggcagaat 120

gcagaaacag aagccnccag atnganctcn gcagatgcta acngggccca ctttgtcc 178

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<222> (23)

<223> n equals a, t, g or c

<220>

<221> misc_feature

<222> (131)

<223> n equals a, t, g or c

<220>

<221> misc_feature

<222> (188)

<223> n equals a, t, g or c

<220>

<221> misc_feature

<222> (228)

<223> n equals a, t, g or c

<400> 27

ggcagagcca agctcctgct gnggccccaa cgacgcgccc gctggcccct aaggccgggt 60

cctgccccgg aaggtctccc cggcccgcat cccgaggcgc ccaagctgga gccgcctgga 120

gggcttcggt ncggcgaacc tctgaaagag aagtgccacc gagcaaacca agtgccggta 180

gcaccagngc cgcctttcca tggagactcg taagcagctt catctganac gggaatccct 240

ggtttgcttt tagctacaag caag 264

<210> 28

<211> 1067

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (34)..(624)

<400> 28

gctccaagcc cagcctgccc cgctgccgcc acc atg acg ctc ctc ccc ggc ctc 54

Met Thr Leu Leu Pro Gly Leu
1 5

ctg ttt ctg acc tgg ctg cac aca tgc ctg gcc cac cat gac ccc tcc 102
Leu Phe Leu Thr Trp Leu His Thr Cys Leu Ala His His Asp Pro Ser
10 15 20

ctc agg ggg cac ccc cac agt cac ggt acc cca cac tgc tac tcg gct 150
Leu Arg Gly His Pro His Ser His Gly Thr Pro His Cys Tyr Ser Ala
25 30 35

gag gaa ctg ccc ctc ggc cag gcc ccc cca cac ctg ctg gct cga ggt 198
Glu Glu Leu Pro Leu Gly Gln Ala Pro Pro His Leu Leu Ala Arg Gly
40 45 50 55

gcc aag tgg ggg cag gct ttg cct gta gcc ctg gtg tcc agc ctg gag 246
Ala Lys Trp Gly Gln Ala Leu Pro Val Ala Leu Val Ser Ser Leu Glu
60 65 70

gca gca agc cac agg ggg agg cac gag agg ccc tca gct acg acc cag 294
Ala Ala Ser His Arg Gly Arg His Glu Arg Pro Ser Ala Thr Thr Gln
75 80 85

tgc ccg gtg ctg cgg ccg gag gag gtg ttg gag gca gac acc cac cag 342
Cys Pro Val Leu Arg Pro Glu Glu Val Leu Glu Ala Asp Thr His Gln
90 95 100

cgc tcc atc tca ccc tgg aga tac cgg gtg gac acg gat gag gac cgc 390
Arg Ser Ile Ser Pro Trp Arg Tyr Arg Val Asp Thr Asp Glu Asp Arg
105 110 115

tat cca cag aag ctg gcc ttc gcc gag tgc ctg tgc aga ggc tgt atc 438
Tyr Pro Gln Lys Leu Ala Phe Ala Glu Cys Leu Cys Arg Gly Cys Ile
120 125 130 135

gat gca cgg acg ggc cgc gag aca gct gcg ctc aac tcc gtg cgg ctg 486
Asp Ala Arg Thr Gly Arg Glu Thr Ala Ala Leu Asn Ser Val Arg Leu
140 145 150

ctc cag agc ctg ctg gtg ctg cgc cgc cgg ccc tgc tcc cgc gac ggc 534
Leu Gln Ser Leu Leu Val Leu Arg Arg Arg Pro Cys Ser Arg Asp Gly
155 160 165

tcg ggg ctc ccc aca cct ggg gcc ttt gcc ttc cac acc gag ttc atc 582
Ser Gly Leu Pro Thr Pro Gly Ala Phe Ala Phe His Thr Glu Phe Ile
170 175 180

cac gtc ccc gtc ggc tgc acc tgc gtg ctg ccc cgt tca gtg 624
His Val Pro Val Gly Cys Thr Cys Val Leu Pro Arg Ser Val
185 190 195

tgaccgccaa ggccgtgggg cccttagact ggacacgtgt gctccccaga gggcaccccc 684

tatttatgtg tatttattgt tatttatatg cctcccccaa cactaccctt ggggtctggy 744

cattccccgt gtctggagga cagcccccca ctgttctcct catctccagc ctcaagtagtt 804

gggggtwgaa ggagctcagc acctcttcca gcccttaaag ctgcagaaaa ggtgtcacac 864

ggctgcctgt accttggytc cctgtcctgc tcccggcttc ccttacccta tcaactggcct 924

caggcccccg caggctgcct cttcccaacc tccttgaag taccctgtt tcttaaacia 984

ttattttaagt gtacgtgtat tattaaactg atgaacacaa aaaaaaaaaa aaaaaaaaaa 1044
 aaaaaaaaaa aaaaaaaaaa aaa 1067

<210> 29
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 29
 Met Thr Leu Leu Pro Gly Leu Leu Phe Leu Thr Trp Leu His Thr Cys
 1 5 10 15
 Leu Ala His His Asp Pro Ser Leu Arg Gly His Pro His Ser His Gly
 20 25 30
 Thr Pro His Cys Tyr Ser Ala Glu Glu Leu Pro Leu Gly Gln Ala Pro
 35 40 45
 Pro His Leu Leu Ala Arg Gly Ala Lys Trp Gly Gln Ala Leu Pro Val
 50 55 60
 Ala Leu Val Ser Ser Leu Glu Ala Ala Ser His Arg Gly Arg His Glu
 65 70 75 80
 Arg Pro Ser Ala Thr Thr Gln Cys Pro Val Leu Arg Pro Glu Glu Val
 85 90 95
 Leu Glu Ala Asp Thr His Gln Arg Ser Ile Ser Pro Trp Arg Tyr Arg
 100 105 110
 Val Asp Thr Asp Glu Asp Arg Tyr Pro Gln Lys Leu Ala Phe Ala Glu
 115 120 125
 Cys Leu Cys Arg Gly Cys Ile Asp Ala Arg Thr Gly Arg Glu Thr Ala
 130 135 140
 Ala Leu Asn Ser Val Arg Leu Leu Gln Ser Leu Leu Val Leu Arg Arg
 145 150 155 160
 Arg Pro Cys Ser Arg Asp Gly Ser Gly Leu Pro Thr Pro Gly Ala Phe
 165 170 175
 Ala Phe His Thr Glu Phe Ile His Val Pro Val Gly Cys Thr Cys Val
 180 185 190
 Leu Pro Arg Ser Val
 195

<210> 30
 <211> 332
 <212> DNA
 <213> Homo sapiens

<220>
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 <222> (162)
 <223> n equals a, t, g or c

<220>
 <221> misc_feature

<222> (194)
 <223> n equals a, t, g or c

<220>
 <221> misc_feature
 <222> (214)
 <223> n equals a, t, g or c

<220>
 <221> misc_feature
 <222> (260)
 <223> n equals a, t, g or c

<220>
 <221> misc_feature
 <222> (277)
 <223> n equals a, t, g or c

<220>
 <221> misc_feature
 <222> (290)
 <223> n equals a, t, g or c

<220>
 <221> misc_feature
 <222> (305)
 <223> n equals a, t, g or c

<220>
 <221> misc_feature
 <222> (314)
 <223> n equals a, t, g or c

<400> 30
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 gctgtatcga tgcacggacg ggccgcgaga cagctgcgct caactccgtg cggctgctcc 120
 agagcctgac tgggtgctgcg ccgccggccc tgactaccgc cnacggacta cgggggctac 180
 cccacacctg gggncctttg accttcaca ccgnagttac atgccacgta ccccgttcgg 240
 gctgtcacct gacgtgctgn ccccgtttac agtgtgnacc gaccgtaggn ccgtaggggtc 300
 ccctnagtac tggnacacgt gtgatacccc ag 332

<210> 31
 <211> 522
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(522)

<400> 31
 ggc tgc gcg gac cgg ccg gag gag cta ctg gag cag ctg tac ggg cgc 48
 Gly Cys Ala Asp Arg Pro Glu Glu Leu Leu Glu Gln Leu Tyr Gly Arg
 1 5 10 15
 ctg gcg gcc ggc gtg ctc agt gcc ttc cac cac acg ctg cag ctg ggg 96
 Leu Ala Ala Gly Val Leu Ser Ala Phe His His Thr Leu Gln Leu Gly

20	25	30	
ccg cgt gag cag gcg cgc aac gcg agc tgc ccg gca ggg ggc agg ccc Pro Arg Glu Gln Ala Arg Asn Ala Ser Cys Pro Ala Gly Gly Arg Pro 35 40 45			144
gcc gac cgc cgc ttc cgg ccg ccc acc aac ctg cgc agc gtg tcg ccc Ala Asp Arg Arg Phe Arg Pro Pro Thr Asn Leu Arg Ser Val Ser Pro 50 55 60			192
tgg gcc tac aga atc tcc tac gac ccg gcg agg tac ccc agg tac ctg Trp Ala Tyr Arg Ile Ser Tyr Asp Pro Ala Arg Tyr Pro Arg Tyr Leu 65 70 75 80			240
cct gaa gcc tac tgc ctg tgc cgg ggc tgc ctg acc ggg ctg ttc ggc Pro Glu Ala Tyr Cys Leu Cys Arg Gly Cys Leu Thr Gly Leu Phe Gly 85 90 95			288
gag gag gac gtg cgc ttc cgc agc gcc cct gtc tac atg ccc acc gtc Glu Glu Asp Val Arg Phe Arg Ser Ala Pro Val Tyr Met Pro Thr Val 100 105 110			336
gtc ctg cgc cgc acc ccc gcc tgc gcc ggc ggc cgt tcc gtc tac acc Val Leu Arg Arg Thr Pro Ala Cys Ala Gly Gly Arg Ser Val Tyr Thr 115 120 125			384
gag gcc tac gtc acc atc ccc gtg ggc tgc acc tgc gtc ccc gag ccg Glu Ala Tyr Val Thr Ile Pro Val Gly Cys Thr Cys Val Pro Glu Pro 130 135 140			432
gag aag gac gca gac agc atc aac tcc agc atc gac aaa cag ggc gcc Glu Lys Asp Ala Asp Ser Ile Asn Ser Ser Ile Asp Lys Gln Gly Ala 145 150 155 160			480
aag ctc ctg ctg ggc ccc aac gac gcg ccc gct ggc ccc tga Lys Leu Leu Leu Gly Pro Asn Asp Ala Pro Ala Gly Pro 165 170			522

<210> 32
 <211> 173
 <212> PRT
 <213> Homo sapiens

<400> 32
 Gly Cys Ala Asp Arg Pro Glu Glu Leu Leu Glu Gln Leu Tyr Gly Arg
 1 5 10 15
 Leu Ala Ala Gly Val Leu Ser Ala Phe His His Thr Leu Gln Leu Gly
 20 25 30
 Pro Arg Glu Gln Ala Arg Asn Ala Ser Cys Pro Ala Gly Gly Arg Pro
 35 40 45
 Ala Asp Arg Arg Phe Arg Pro Pro Thr Asn Leu Arg Ser Val Ser Pro
 50 55 60
 Trp Ala Tyr Arg Ile Ser Tyr Asp Pro Ala Arg Tyr Pro Arg Tyr Leu
 65 70 75 80
 Pro Glu Ala Tyr Cys Leu Cys Arg Gly Cys Leu Thr Gly Leu Phe Gly
 85 90 95

Glu Glu Asp Val Arg Phe Arg Ser Ala Pro Val Tyr Met Pro Thr Val
 100 105 110

Val Leu Arg Arg Thr Pro Ala Cys Ala Gly Gly Arg Ser Val Tyr Thr
 115 120 125

Glu Ala Tyr Val Thr Ile Pro Val Gly Cys Thr Cys Val Pro Glu Pro
 130 135 140

Glu Lys Asp Ala Asp Ser Ile Asn Ser Ser Ile Asp Lys Gln Gly Ala
 145 150 155 160

Lys Leu Leu Leu Gly Pro Asn Asp Ala Pro Ala Gly Pro
 165 170